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K	S	Comment Synopsis	Recommended Action
2	G	Consistent use of shall rather than sometimes using should.	Metadata references modified to read: "shall be documented in the metadata field:"
2	G	the word "reported" is sometimes replaced with "described fully" documented, documented, identified and made available. Use one term consistently.	Metadata references modified to read: "shall be documented in the metadata field:"
2	G	The phrase "in the metadata....." is represented in different ways. Suggest consistent use of "in the following metadata field: (.....)"	Metadata references modified to read: "shall be documented in the metadata field:"
2	G	Consistently use "overedge" rather than over edge and over-edge.	Consistent use applied as "overedge". Definition added to Appendix B.
2	Ref	Italicize the publication titles	FGDC guidelines refer to the "Suggestions to Authors of the Reports of the USGS", which does not provide guidence to italicize.
2	A	Put the Appendix title in the header.	Done, as directed by directive 6, FGDC Guideline for Formatting Standards.
2	A	Capitalize quadrangle in the title.	Title changed, "quadrangle" no longer in title.
2	A 2.3	Add paragraph space before tenth sentence and therafter before every paragraph.	Improper paragraph spacing corrected.
2	A 2.4. 1.1	Add space to TechnicalInstructions	Correction applied.
2	A 2.5. 2.1	Second paragraph, third sentance is incorrect if it suggests that AT points are third order or better. Fiield control is, AT is not. Second Paragraph Sixth sentance: since none of the numbers are units of measure or greater than or equal to 10, they should be spelled. Our understanding is that planar DEMs are not acceptable for DOQ generation for the USGS.	USGS internal issue. "Or other sources" replaced AT. Number representation as suggested differs from style manual, style manual applied. Remaining points are non substantive.
4	Ref	Misspelled Fundamentals in title.	Spelling Corrected.
4	A 2.3	Add discussion of areas where there is insufficient ground control such as costal zones and international boundaries. Images may be distorted beyond these limits.	Non substantive, since this is just an "example"

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4	A 2.5. 2.1	"Standard" should be plural in reference to NMAS.	Correction applied.
5	G	This standard lacks specification of how to define insets.	Not applicable, outside scope of standard. Image insets define discreet separate files , and present themselves as a function of cartographic presentation.(ie. Overprint, display layers).
7	G	This standard applies to USGS procedures for DOQ production, being more prescriptive (procedural based) specification than a "standard". Applicability outside the USGS is uncertain.	Example appendix A is USGS but only an example. The standard body does not apply to USGS only, although some USGS examples are referenced. No specific action. Disagree that the standard is prescriptive, the example may appear so.
6	1.1	Stating that the standard describes quality control and testing is mis leading since although there is mention of quality control methods, it does not go into any depth in using the methodology.	Statement changed to reflect focus on reporting of methods.
5	3	Quadrilateral form incompatible with TEC data with more than 4 sides.	Format accomodates non regular area of interest but requires padding to quadralateral with fixed record length. No change deemed necessary.
7	3.0	Remove references to USGS, just state needs. This is a FGDC not USGS standard.	Some USGS references removed. Those used in examples or references remain.
5	3.1 8.2	8-Bit (256 grey levels) too restrictive. TEC and others often use 11-bit (4096 grey levels) or 7-bit, etc.	Changed to recommendation of 8-bit. Left open to other formats.
2	3.1	First sentence. Would be more correct to say the relative **radiance** rather than the relative **irradiance**. Last sentence. Use arabic numeral "0" rather than zero since it is a unit of measure.	Correction applied.
5	4	TEC does not use SDTS	Non substantive since SDTS is Optional.
2	5	Add Laser Detection and Ranging (LIDAR) to the list of sensors.	LIDAR added.
4	5	Add LIDAR to the list of imaging systems.	LIDAR added.
4	5	Add the words " Image Identifiable" to the bullet "ground control. Points must be identifiable for aerotrig.	Suggestion applied.

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2	5.2	Add Black and White Infra Red film as a film type under this standard. B&W IR is sensitive to EM radiation outside the visible while still a grayscale. Principal user believed to be NOAA.	B&W Infrared added.
7	5.3	Define “small size” and “large scale”.	References removed.
6	5.4	Feel that “shall be sufficiently accurate” suggests it is O.K. if not accurate. Recommend “shall meet or exceed” giving a minimum requirement to meet the standard. Should explicitly state that NMAS will be replaced by NSSDA or refer to NSSDA.	Changed reference to NSSDA and error propogation study of process to determine required accuracy .vs. Requirements.
1	5.4	More Information should be reported on the source DEM since DEM’s rarely meet claimed levels of vertical accuracy or resolution. Warn users of artifacts. Current reporting requirements are inadequate.	Added artifact reporting in metedata requirement. Truth of DEM accuracy statement outside scope.
7	5.5	Define “large scale” and use consistent form (prefer non hyphenated). Add reference to airborne GPS.	Removed reference to scale. Aiborn GPS is included in “other accepted positioning technologies.”
6	5.5	Feel that “shall be sufficiently accurate” suggests it is O.K. if not accurate. Recommend “shall meet or exceed” giving a minimum requirement to meet the standard. Should define minimum acceptable limits relative to intended resolution. A table listing minimum ranges would be helpful. Vague reference to “similarly inaccurate”, begs the question of what is an accurate method?	Table too complex and subjective. Thresholds intentionally avoided to be left for product specifications, such that accuracy threshold be defined by users to meet requirements.
7	5.6	Sentence 1: add “always” (parameters are always required) Sentence 2: Does this sentence refer to a USGS or a FGDC standard?	Required is sufficient, always not needed. USGS camera calibration standards, FGDC does not have such a standard to refer to.
2	6	change ortho-images to orthoimages	Consistent reference to “orthoimagery” applied.
7	6.0	FGDC or USGS? Remove reference to USGS.	Modified, but remains as an an example.
6	6	Untrue statement that USGS 7.5-min quad is large scale. NSSDA says larger than 1:20K is large. USACE considers 1:12K small scale since they do 1:600, 1:1,200, and 1:6,000 scale mapping.	Standard does not say that the 7.5 minute USGS quad is “large scale”. Refers to a sub-set of the 7.5 as possible scheme for large scale. Removed scale reference.

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5	7	Need explicit georeferencing information	4-tuple included to provide explicit georeferencing.
1	7	WGS should be the default datum rather than NAD. This will make the standard acceptable overseas.	Framework definitions for default datum are NAD. Others are allowed.
2	7	Change third sentence of first paragraph to : The default reference for the horizontal datum of framework data is.	Requested change applied.
5	7	NAD83 datum not compatible with the Army primary use of WGS84 and other local datum	Framework definitions for default datum are NAD. Others are allowed.
5	7	Add following key words to metadata: Horizontal units Projection Datum Datum_origin_X_offset_from_WGS84 Vertical Datum Vertical Units Projection Zone	Outside scope, refer to Content Standard for Geospatial Metadata.
7	7.0	Reference to SPCS incompatible with DE standard which does not recognize SPCS.	Non Substantive, SPCS stays. Will add to DE standard.
6	8	Vague description of resolution. Very important since it defines quality and file sizes. What is acceptable and what is not.	We feel comfortable with the description. This standard intentionally does not define thresholds. Users define thresholds to meet requirements.
1	8	Term “resolution is misused. Neither IFOV nor pixel size equal resolution. More detail in comments on DED standard.	We feel comfortable with the description in section 8. The standard does not state that IFOV or pixel size equal resolution.
2	8.1	“We thought Nyquist suggested subsampling somewhere between two and two times the square root of two, not simply two.”	The Nyquist frequency limits subsampling to **a maximum of** 2X to avoid undesirable alaising. This statement correctly points out the uppermost threshold.
2	8.2	Inconsistent reference to “ zero” and “0"	Consistent use of arabic applied where appropriate.

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6	9	Accuracy reference to NMAS only adaptable to small scale mapping. Should refer to ASPRS accuracy standard for small scales. Para.3 Sent.4- remove double "and", and replace "are usually tested" with "are tested". Add a copy of reference standards to the appendix.	Reference changed to NSSDA, which referrs to both NMAS and ASPRS. "Usually" removed. Reference to NSSDA added.
7	9	Why not reference FGDC or ASPRS standards? Leave out "is being" in front of "developed by the FGDC". "Highly recommended" is too vague. Should this procedure be accomplished to meet the standard or not?	Both referenced through NSSDA. "Is being" removed. Highly recommended amended to require report.
3	9	NMAS does not apply to Digital Orthoimagery.	Primary reference changed to NSSDA.
2	9	First Paragraph: Change smaller than 1:20,000 to equal to or smaller than 1:20,000. Therefore the **to** (erroneous to). Second Paragraph: Framework improperly capitalized. Use the % symbol to be consistent with DED std. Change confidence **circle** to confidence **level**. Third paragraph: Fifth sentence, improper phrase: "and to and" Sixth sentence, capitalize Chapter and Part.	Section rewritten.
2	10	Second paragraph, "Detailed descriptions **of** the (missing of)	"of" added.
6	10.1	If systematic errors are important enough to mention, they should be discussed. (A weak sentence) Elaborate on methods used to transform image values. (Add detail)	Discussion in detail would require process definition which is outside the scope of the standard.
2	10.1 .1	Change (e.g. on the) to (e.g.**,** on the...) Change (incidence of the)... to (**the** incidence..) Change (cost-effective) to (cost effective) Change (Smearing in **a** image) to (smearing in **an** image) Rewrite the second paragraph, fifth sentence.	Grammar changes made. Sentance rewritten.
7	10.1 .1	Does the second paragraph refer to a standard or a specification?	Standard. Reworded to remove reject and remake or recollection.

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7	10.1	Does the second paragraph refer to a standard or a specification?	Standard.
7	10.1 .2	Reads like a spec. Not a standard.	Modified to remove correction specification.
6	11.1	Retitle to "CLOUD COVER AND CLOUD SHADOW". Cloud shadows are just as detrimental as cover ,due to tonal changes. Clarify minimum specification.	Shadow added in body. Minimum specification removed, as this is dependant on intended use, and should be specified to meet user requirements.
7	11.1	Last two words of sentence 3 read "this specification". This is not a specification, rather it is a standard.	"Specification" removed.
7	12.0	Remove the term "permitted".	"Permitted" removed.
2	13	Change first sentence to ....of good metadata , in order to provide... Delete the semicolon after the phrase Appendix A in the last paragraph.	"In order" added.

Key for the Orthoimagery Comments Review Table

Column 1 (K)- Reference number for comment source as listed below.
Column 2 (S)- Standards document reference number. Numbers indicate section of document. "G" represents a "global" or indirectly referenced comment. "A" represents reference to appendix A. "Ref" referrs to the reference section.

1 = Dave Hastings
Chief Data Fusion and GIS
NOAA National Geophysical Data Center

Email - dah@ngdc.noaa.gov

2 = USGS
Mid-Continent Mapping Center
attn: John Conroy

3 = David Nale
President, Aerial Data Reduction Associates, Inc.
280 Kappa Dr.
Pittsburg, PA.

4 = USGS
Rocky Mountain Mapping Center
attn: Buel Grout

5 = Kevin Backe
USACE/TEC
kbacke@tec.army.mil

6 = David M. Gerczak
USACE-Detroit District
Dave.Gerczak@inet.hq.usace.army.mil

7 = M.K. Miles
HQ USACE